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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,298	10/03/2003	Daisaku Shimazaki	5259-000032	3493
27572 7590 12/28/2007 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER CHERY, DADY	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 12/28/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/678,298

**Applicant(s)**

SHIMAZAKI ET AL.

**Examiner**

Dady Chery

**Art Unit**

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This communication is responsive to the amendment filed on 10/10/2007.
2. Claims 1-23 and 26 -60 indicated allowable as contains allowable subjects matter are now withdrawn in view of new evidence founded see rejection below.

### ***Claim Objections***

1. Claims 1-3, 14, 27 -62 objected to because of the following informalities: the limitation "means for" is preceded by the word "A". This objection can be overcome by cancel the word "A".

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 24 and 25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to a computer program which has been held as non-statutory subject matter. ". This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture, or a composition of matter.

This rejection can be overcome by reciting "a computer-readable storage medium storing a program having computer-executable instructions when executed by a processor to execute...."

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 -62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites the limitation "the virtual node" in line 23. There is insufficient antecedent basis for this limitation in the claim.

Claims 1 as written is unclear. The examiner requests clarification for all the ambiguity in the instant application for example the following limitations : "wherein the network to which said node belongs is a layered network which is built up by: dividing up into cells which are constituted by a plurality of nodes; defining these cells as virtual nodes; if links exist which connect the interiors of the virtual nodes and the exterior, defining the contact points between these interiors of the virtual nodes and the exterior as interfaces of the virtual nodes; further dividing up the virtual network which has been constituted by the virtual nodes into cells; making them into virtual nodes; further dividing them up into cells; the virtual network which has been made into virtual nodes is defined as a network of a higher level with respect to the initial virtual network; and by performing the above described operation of division into cells and making into virtual nodes once or a plurality of times".

Regarding claims 27, 36,,38,49,the examiner requests more clarification for the following limitations : " a virtual node of level 1 in a layered network which has been

defined by dividing up the nodes which make up the network into cells each made up from one or a plurality of said nodes and defining these cells as virtual nodes of level 1, so that these virtual nodes of level 1 constitute a virtual network of level 1, further dividing up these virtual nodes of level 1 which constitute said virtual network of level 1 into cells which are constituted by one or a plurality of virtual nodes, so as to constitute virtual nodes of level 2, and constituting a layered network by virtual networks of levels 1 through N which have been built up by performing the process of dividing into cells and making into virtual nodes in this manner once or a plurality N of times, and by, if a link exists in said layered network which connects between different virtual nodes of the same level or of different levels, defining a node which corresponds to the point of contact between the interior of the virtual node upon this link and the exterior as an interface, so that, when the highest level virtual node to which said interface is related is of level M (where  $M \leq N$ ), said interface serves as a plurality of hierarchical interfaces of level 1 through level M, comprising: a means for advertising to an other node within self virtual node link information about a link which has been connected to self node and link cost information for said link; a means for receiving, from an other node within self virtual node, said advertisement of link information within self virtual node and link cost information for said link, and storing said information; and a means for receiving, from a node which corresponds to said interface within self virtual node, said advertisement of link information between said node and a node which corresponds to an interface with a virtual node of level 2 or greater, and link cost information for said link, and storing said information."

Regarding claim 52, the examiner requests more clarification for the following limitations : " a means for notifying to the destination node to which a path is to be established information which specifies on which level is the virtual node of the topmost level for which path computation from self node to the node which corresponds to the interface is possible based upon information about a link between a node which corresponds to an interface of self virtual node and a node which corresponds to an interface of a virtual node of level 2 or greater and link cost information for said link, and the result of searching for a path from self node to the node which corresponds to said interface for which the link cost is the lowest in order up to the n-th lowest; and said destination node comprises a means for, along with searching out a path from self node to the node which corresponds to the interface with the virtual node of said topmost level for which path computation from said source node to the node which corresponds to the interface is possible based upon said information which has been notified, also combining said search results with the results of searching for a path up to said n-th lowest one, and notifying the path for which the link cost is the minimum to said source node as the final path which has been found."

#### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dady Chery whose telephone number is 571-270-1207. The examiner can normally be reached on Monday - Thursday 8 am - 4 pm EST.


Application/Control Number:  
10/678,298  
Art Unit: 2616

Page 6

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dady Chery 12/12/2007

  
RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER